

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P389983

Luminaire Tested: **24CZ2-90VHE-S-UNV-L950-CD1-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P389983
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-S-UNV-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8517.8 lumens
Efficiency: N/A
Efficacy: 137.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

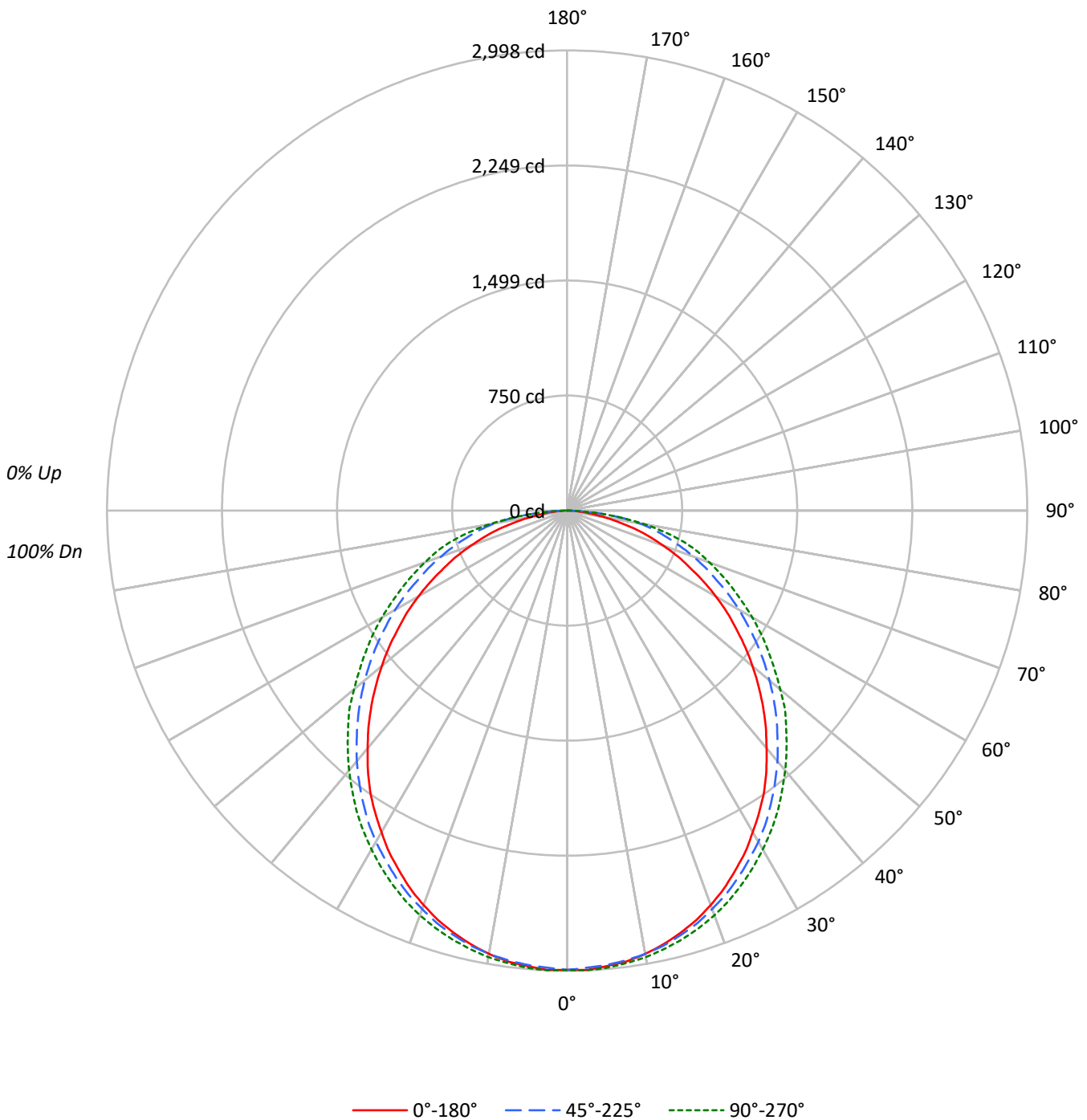
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4026	4026	4026
5°	4023	4012	4038
10°	4007	4007	4037
15°	3969	3987	4029
20°	3917	3955	4017
25°	3844	3916	3992
30°	3758	3871	3960
35°	3675	3809	3928
40°	3550	3745	3882
45°	3434	3671	3841
50°	3302	3602	3794
55°	3154	3535	3757
60°	3007	3480	3750
65°	2817	3420	3773
70°	2608	3438	3874
75°	2335	3502	4093
80°	1887	3711	4004
85°	1420	3257	3174



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.3	3.3
10°-20°	809.5	9.5
20°-30°	1216.8	14.3
30°-40°	1449.4	17.0
40°-50°	1483.4	17.4
50°-60°	1335.5	15.7
60°-70°	1048.8	12.3
70°-80°	680.7	8.0
80°-90°	210.5	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2309.5	27.1
0°-40°	3758.9	44.1
0°-60°	6577.8	77.2
0°-90°	8517.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8517.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2992	2992	2992	2992	2992	
5°	2979	2984	2971	2987	2990	283
15°	2849	2857	2862	2887	2892	803
25°	2589	2611	2638	2681	2689	1193
35°	2238	2265	2319	2376	2392	1396
45°	1805	1848	1929	2002	2018	1391
55°	1345	1404	1507	1586	1602	1205
65°	885	952	1074	1163	1185	881
75°	449	536	674	766	787	475
85°	92	170	211	206	206	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2992.4	2992.4	2992.4	2992.4	2992.4
2.5°	2995.1	2995.1	2981.5	2995.1	2997.8
5°	2978.8	2984.2	2970.7	2986.9	2989.7
7.5°	2962.6	2962.6	2954.5	2970.7	2973.4
10°	2932.8	2935.5	2932.8	2951.8	2954.5
12.5°	2895.0	2900.4	2903.1	2922.0	2924.7
15°	2849.0	2857.1	2862.5	2886.8	2892.3
17.5°	2797.6	2805.7	2819.2	2846.3	2851.7
20°	2735.3	2746.2	2762.4	2797.6	2805.7
22.5°	2667.7	2678.5	2705.6	2738.0	2751.6
25°	2589.2	2610.9	2637.9	2681.2	2689.3
27.5°	2510.8	2529.7	2564.9	2610.9	2621.7
30°	2418.8	2448.5	2491.8	2537.8	2548.6
32.5°	2329.5	2359.3	2410.7	2459.4	2472.9
35°	2237.5	2264.6	2318.7	2375.5	2391.7
37.5°	2132.0	2167.2	2226.7	2283.5	2299.7
40°	2021.1	2064.3	2132.0	2191.5	2210.4
42.5°	1915.5	1961.5	2029.2	2094.1	2115.8
45°	1804.6	1847.9	1929.1	2002.1	2018.4
47.5°	1691.0	1739.7	1826.3	1899.3	1926.4
50°	1577.3	1628.8	1720.7	1796.5	1812.7
52.5°	1463.7	1517.8	1615.2	1696.4	1704.5
55°	1344.7	1404.2	1507.0	1585.5	1601.7
57.5°	1236.4	1287.9	1398.8	1479.9	1498.9
60°	1117.4	1174.2	1293.3	1369.0	1393.4
62.5°	1003.8	1063.3	1187.7	1263.5	1285.1
65°	884.7	952.4	1074.1	1163.4	1185.0
67.5°	781.9	846.8	976.7	1063.3	1084.9
70°	662.9	735.9	873.9	963.2	984.8
72.5°	560.1	635.8	773.8	860.4	892.8
75°	449.1	535.7	673.7	765.7	787.3
77.5°	340.9	441.0	581.7	652.0	652.0
80°	243.5	349.0	478.9	511.4	516.8
82.5°	159.6	262.4	354.4	351.7	351.7
85°	92.0	170.5	211.0	205.6	205.6
87.5°	35.2	70.3	75.8	75.8	73.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)